

NORTH AMERICAN DELTOCEPHALINE LEAFHOPPERS OF THE  
GENUS *DESTRIA* AND A NEW SPECIES OF *LONATURA* FROM  
ARIZONA (HOMOPTERA: CICADELLIDAE)

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ABSTRACT—The North American species of *Destria* Oman are revised, keyed, and redescribed. *Destria crocea* (Beirne) is reported from the United States for the first time. *Lonatura delongi* is described as a new species from Arizona. All critical diagnostic features are illustrated. Distributional and host-grass records are included.

The genus *Destria* Oman belongs to a large group of deltocephaline leafhoppers which share in common a linear connective solidly fused to the base of the aedeagus. Oman (1949:178) described the genus and included two species. Later, Kramer (1967:459) transferred *Lonatura crocea* Beirne to *Destria*. *Destria* is transcontinental in distribution. Hosts are likely to be grasses of the genus *Spartina* or related genera. This paper presents the first taxonomic treatment of the included species, all of which occur in North America.

*Destria* Oman

*Destria* Oman, 1949:178. Type-species: *Thamnotettix bisignatus* Sanders and DeLong.

Moderate-sized to fairly large deltocephaline leafhoppers (3.8–5 mm). Head wider than pronotum. Anterior margin of head rounded to face. Clypeal suture distinct or obscure. Ocelli close to eyes. Pronotum moderately long. Forewings long, extending well beyond apex of abdomen, or much shortened, rounded apically, exposing 4 abdominal segments dorsally, without extra crossveins in clavi. *Male genitalia*: Valve small; plates subtriangular, spinelike setae uniseriate; pygofer strongly setose; aedeagus moderately elongated and tubelike, notched apically on ventral margin, gonopore fairly large and delimited by distinct rim on dorsal margin, connective with stalk at juncture with aedeagus. *Female genitalia*: Pregenital sternum narrowed distally and exposing underlying sclerites laterally. Color stramineous to ochreous, unmarked or with blackened areas on or near anterior coronal margin.

KEY TO THE NORTH AMERICAN SPECIES OF *DESTRIA*

1. Crown marked with black along anterior margin (fig. 1); distribution: East Coast from New Jersey to Florida ..... *bisignata* (Sanders and DeLong)
- Crown unmarked; distribution: central and northwestern states and adjacent provinces of Canada ..... 2

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2. Aedeagus in dorsal view with notch at apex long and narrow (fig. 12);  
distribution: Minnesota, Wisconsin, Missouri, and Kansas -----  
----- *fumida* (Sanders and DeLong)  
— Aedeagus in dorsal view with notch at apex short and broad (fig. 17);  
distribution: Oregon, Saskatchewan and Manitoba ----- *crocea* (Beirne)

*Destria bisignata* (Sanders and DeLong)

fig. 1-7

*Thamnotettix bisignatus* Sanders and DeLong, 1923:154.

*Graminella bisignata* (Sanders and DeLong); DeLong and Mohr, 1937:626.

*Destria bisignata* (Sanders and DeLong); Oman, 1949:178.

Length: Males 3.8-4.5 mm. Females 4-5 mm.

Structure: Crown in dorsal view (fig. 1) bluntly angular apically, interocular width greater than median coronal length. Head in lateral view with crown flat or slightly depressed in posterior half; clypeal suture usually faint; forewing much longer than abdomen; inner anteapical cell closed basally, basal crossvein often weak; central anteapical cell undivided; outer anteapical cell normal or slightly reduced; without extra crossveins in forewing.

Coloration: Uniformly pale stramineous with pair of wide, curved, black marks on anterior margin (fig. 1); abdominal dorsum variably infuscated; forewings hyaline with veins unpigmented.

Male genitalia: Aedeagus in lateral view (fig. 3-4) elongate with shaft uniformly wide; apical portion slightly expanded on ventral margin and lobed on dorsal margin, then gradually narrowing to rounded tip; apical portion of aedeagus in dorsal view (fig. 7) with ventral notch widest basally; connective in dorsal view (fig. 2) with narrow stalk at juncture with aedeagus; style in dorsal view (fig. 6) with mesal lobe fairly stout and moderately long, lateral lobe short and bluntly angular; stylar lobes in dorso-lateral view (fig. 5) with mesal lobe bearing blunt subapical tooth and lateral lobe broad.

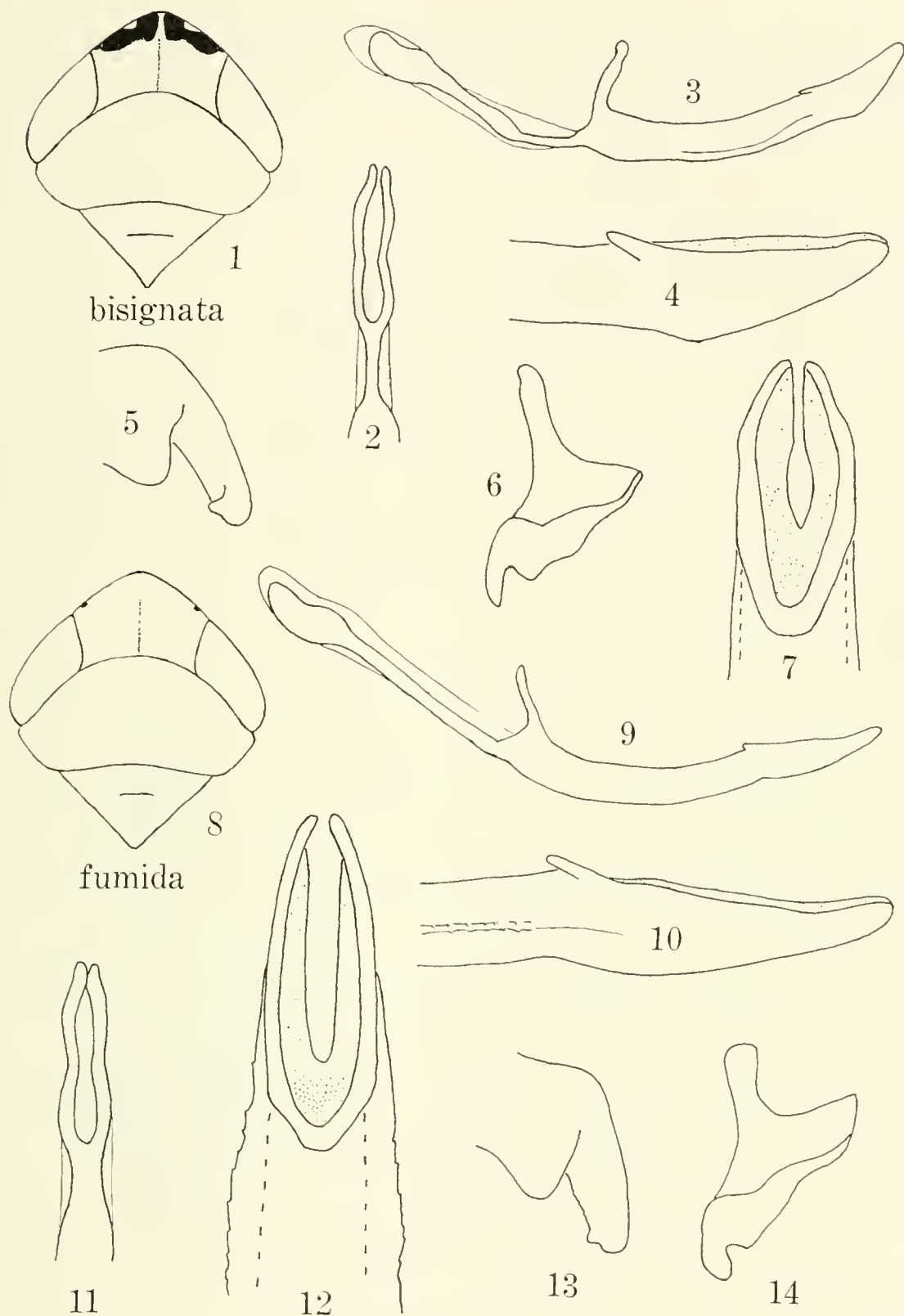
Female genitalia: Posterior margin of pregenital sternum narrower than anterior margin, truncate to slightly concave, at times with vague or poorly defined blunt tooth at middle.

Records: The type-locality is Cleveland, Florida. My confirmed records: FLORIDA, Cleveland, Fort Pierce, Jacksonville, Sanford; MARYLAND, Annapolis, Berlin, Cambridge, Chestertown, Crisfield, Easton, Gibson Island, Ocean City, Salisbury, Snow Hill, Sparrows Point; NEW JERSEY, Tuckerton; VIRGINIA, Exmore, Onley.

Notes: The black marks on the anterior margin of the crown will at once distinguish *D. bisignata* from its congeners. Only the specimens from New Jersey were collected with a host plant association: saltmeadow cordgrass, *Spartina patens* (Ait.) Muhl. Saltmeadow cordgrass occurs along the Atlantic and Gulf Coasts from Maine to

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4, Aedeagal apex in lateral view. 5, Distal portion of style in dorsolateral view.  
Fig. 1-7. *Destria bisignata*. 1, Head and thoracic dorsum. 2, Connective and base of aedeagus in dorsal view. 3, Aedeagus and connective in lateral view.



6, Style in dorsal view. 7, Aedeagal apex in dorsal view. Fig. 8-14. *Destria fumida*. 8, Head and thoracic dorsum. 9, Aedeagus and connective in lateral view. 10, Aedeagal apex in lateral view. 11, Connective and base of aedeagus in dorsal view. 12, Aedeagal apex in dorsal view. 13, Distal portion of style in dorso-lateral view. 14, Style in dorsal view.

eastern Texas in salt marshes, sandy meadows, and in saline marshes inland. The distributional records of the leafhopper fall within the range of saltmeadow cordgrass, and it seems likely that this grass is the true host.

*Destria fumida* (Sanders and DeLong)

fig. 8-14

*Deltocephalus fumidus* Sanders and DeLong, 1917:86.

*Polyamia algosus* DeLong and Davidson, 1935:165.

*Destria fumida* (Sanders and DeLong); Oman, 1949:178.

*Destria algosa* (DeLong and Davidson); Oman, 1949:178. As = *fumida*.

Length: Males 4-4.4 mm. Females 4.7-5 mm.

Structure: Crown in dorsal view (fig. 8) not significantly different from that of *D. bisignata*. Head in lateral view with crown flat or slightly depressed in posterior half; clypeal suture faint or absent; forewing clearly exceeding apex of abdomen; inner anteapical cell either closed or open basally; central anteapical cell undivided; outer anteapical cell normal; without extra crossveins in forewing.

Coloration: Somewhat variable, uniformly pale stramineous to fumose stramineous with vague darkening along veins of hyaline forewings; abdominal dorsum lightly infuscated.

Male genitalia: Aedeagus in lateral view (fig. 9-10) similar to that of *D. bisignata* except for exceedingly narrow finely dentate ridge on sides; apical portion of aedeagus in dorsal view (fig. 12) with long ventral notch nearly uniformly wide or slightly narrower basally; connective in dorsal view (fig. 11) with broad stalk at juncture with aedeagus; style in dorsal view (fig. 14) with mesal lobe stout and moderately long, lateral lobe short and bluntly angular; stylar lobes in dorsolateral view (fig. 13) with mesal lobe bearing blunt subapical tooth and lateral lobe broad.

Female genitalia: Posterior margin of pregenital sternum like that of *D. bisignata* except the blunt tooth at middle more clearly delimited by darkened area on each side.

Records: The type-locality is Woodman, Wisconsin. My confirmed records: KANSAS, Douglas Co., Saline Co., MINNESOTA, Crookston, St. Paul; MISSOURI, Landon; WISCONSIN, Wisconsin Rapids, Woodman.

Notes: The lack of coronal markings and the long ventral notch at the aedeagal apex distinguish *D. fumida* from its congeners. No host records are available, but the host might well prove to be a species of *Spartina* found in the middle portion of the United States.

*Destria crocea* (Beirne)

fig. 15-18

*Lonatura crocea* Beirne, 1955:375.

*Destria crocea* (Beirne); Kramer, 1967:495.

Length: Males and females 4-4.5 mm.

Structure: Crown in dorsal view (fig. 15) not significantly different from that of *D. bisignata*. Head in lateral view with crown flat; clypeal suture faint;

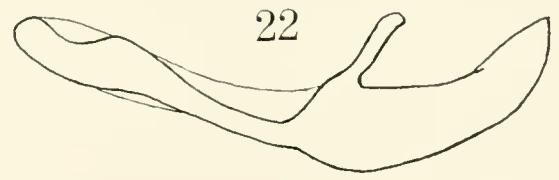
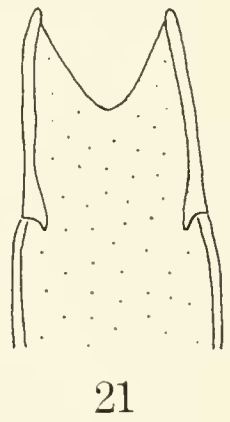
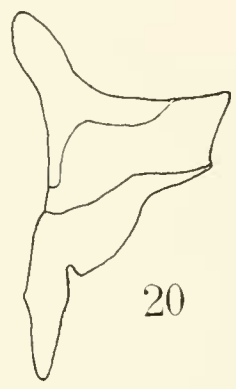
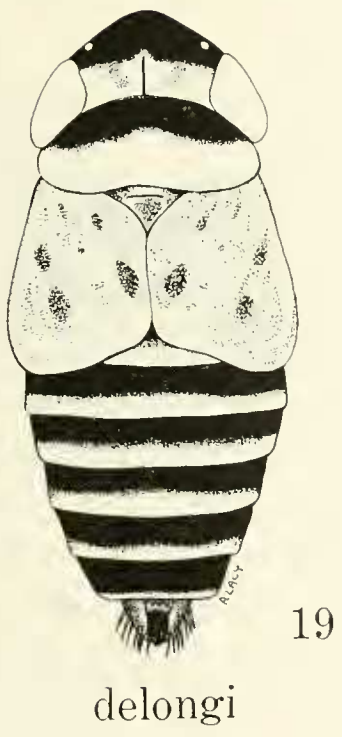
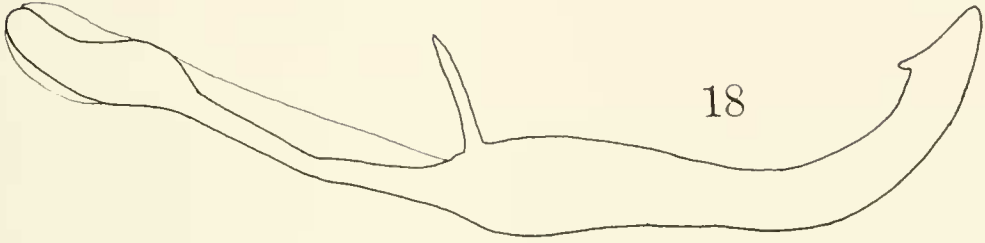
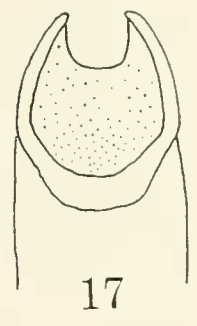
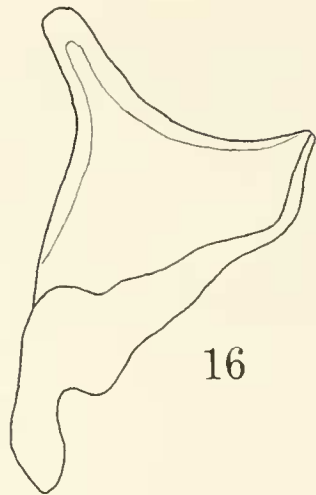
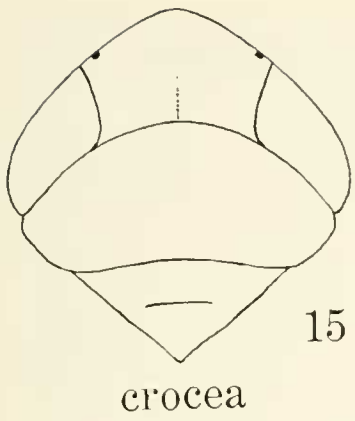


Fig. 15-18. *Destria crocea*. 15, Head and thoracic dorsum. 16, Style in dorsal view. 17, Aedeagal apex in dorsal view. 18, Aedeagus and connective in lateral view. Fig. 19-22. *Lonatura delongi*. 19, Habitus in dorsal view. 20, Style in dorsal view. 21, Aedeagal apex in dorsal view. 22, Aedeagus and connective in lateral view.

forewing either clearly exceeding abdomen with venation similar to that of *D. bisignata* or much shortened, rounded apically, with venation reduced; in the shortwinged condition, 4 abdominal segments exposed dorsally.

Coloration: Somewhat variable, uniformly stramineous to ochreous; basal angles of scutellum at times pale orange; abdominal dorsum at times lightly infuscated.

Male genitalia: Aedeagus in lateral view (fig. 18) similar to that of *D. bisignata* but more clearly upturned distally; apical portion of aedeagus in dorsal view (fig. 17) with ventral notch broad but shallow, its width and length about equal; connective in dorsal view like that of *D. fumida*; style in dorsal view (fig. 16) with mesal lobe stout and moderately long, lateral lobe short and bluntly angular.

Female genitalia: Pregenital sternum not distinguishable from that of *D. fumida*.

Records: The type-locality is Bateman, Saskatchewan. My confirmed records: MANITOBA, Aweme; OREGON, La Grande; SASKATCHEWAN, Bateman, El bow.

Notes: The lack of coronal markings and the short and broad ventral notch at the aedeagal apex distinguish *D. crocea* from its congeners. No host records are available, but the host might well prove to be a species of *Spartina* found in the Northwest and adjacent portions of Canada. The Oregon report provides the first United States record of *D. crocea*. It is based on a single longwinged male in the USNM with the data: "La Grande, Oregon, 17 August 1947, J. E. Davis Coll."

#### *Lonatura* Osborn and Ball

The genus *Lonatura* belongs to the same group of deltocephaline leafhoppers as does *Destria*. In *Lonatura* brachyptery is the rule rather than the exception; although macropterous specimens are sometimes found, they are rather rare and possess a somewhat distorted venational pattern in the forewings. Even though brachyptery occurs in a few species as the exception in related genera, in these exceptions the shortened forewings are always rounded apically and no more than four abdominal segments are exposed dorsally. In *Lonatura* the forewings are truncated apically and five to seven abdominal segments are exposed dorsally. *Lonatura* was last revised by Kramer (1967).

#### *Lonatura delongi* Kramer, new species

fig. 19-22

Length: Male 3-3.2 mm.

Structure: Head bluntly angular, coronal length at middle less than interocular width, ocellus removed from eye, 6-7 abdominal segments visible in dorsal view, venation of forewings variably distinct.

Coloration: Thoracic venter, legs, and most of face stramineous to ochreous; face below upper margin black as extension of coronal marking. In dorsal view (fig. 19) crown with anterior half black and posterior half stramineous to yellow, usually with ill-defined spot on each side of coronal suture in basal half; pronotum

stramineous to yellow and broadly marked with black or fuscus along anterior margin; scutellum infuscated in all angles; forewing yellowish to whitish with a variable number of scattered fuscus or brown patches or spots; abdominal segments both dorsally and ventrally black or fuscus with distal margins yellowish, thus appearing to be transversely banded.

Male genitalia: Aedeagus in lateral view (fig. 22) simple, stout, distally slightly upturned, extreme apex acutely angular, with minute subapical tooth on dorsal margin; aedeagal apex in dorsoanterior view (fig. 21) with broad and moderately deep notch at apex, gonopore not delimited; style in dorsal view (fig. 20) with mesal lobe moderately long and tapering toward apex, lateral lobe short and broad.

Female genitalia: Female unknown.

Types: Holotype male (USNM 73291) and five paratype males, Douglas, Arizona, 21 August 1932, E. D. Ball.

Notes: In my key to species (Kramer, 1967:435), this species will trace to couplet 2 and no further. It is easily distinguished from all its congeners on the basis of the bicolored crown, pronotum, and abdominal segments plus the spotted forewings. The male genitalia resemble those of *L. noctivaga* Ball (Kramer, 1967: fig. 25-28), but that species is a larger and differently marked leafhopper (Kramer, 1967: fig. 24). I take great pleasure in naming this distinctive species for Professor Dwight M. DeLong as a small recognition of his numerous contributions to leafhopper taxonomy over the last 50 years.

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